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ABSTRACT

This booklet explains the federal government's purpose and procedures for conducting a survey to determine civil service employees' skills, knowledges, and abilities so that they may be more fully utilized and/or developed. In section I the term "skills survey" is defined and its functions are viewed as part of an upward mobility program. Section II lists the personnel involved in planning and implementing the survey. Section III advises each government agency to assess its own information needs by either examining its existing job descriptions or by performing a job analysis. The scope of the project and use of a timetable are discussed. Then, the pros and cons of various procedures are debated for obtaining specific data on employees' skills. The approaches considered include (1) searching personnel files, (2) conducting personal interviews, (3) administering questionnaires to employees in groups, (4) mailing out questionnaires, and (5) using mail questionnaires with followup interviews. In section IV, government publications and Appendix 1 are suggested as resources for instructions on how to evaluate the data. Section V and Appendix 2 cover the methods of coding the data for storage and retrieval. The implementation and update of the survey are discussed in section VI. In the final two sections, the survey administrator is warned of various pitfalls and the need to comply with the Privacy Act. Appendixes 3 and 4 provide sample forms. (ELG)

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Upward Mobility
Through Full Utilization of Employee Skills

The Skills Survey

What It Is and How It Works

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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The Skills Survey

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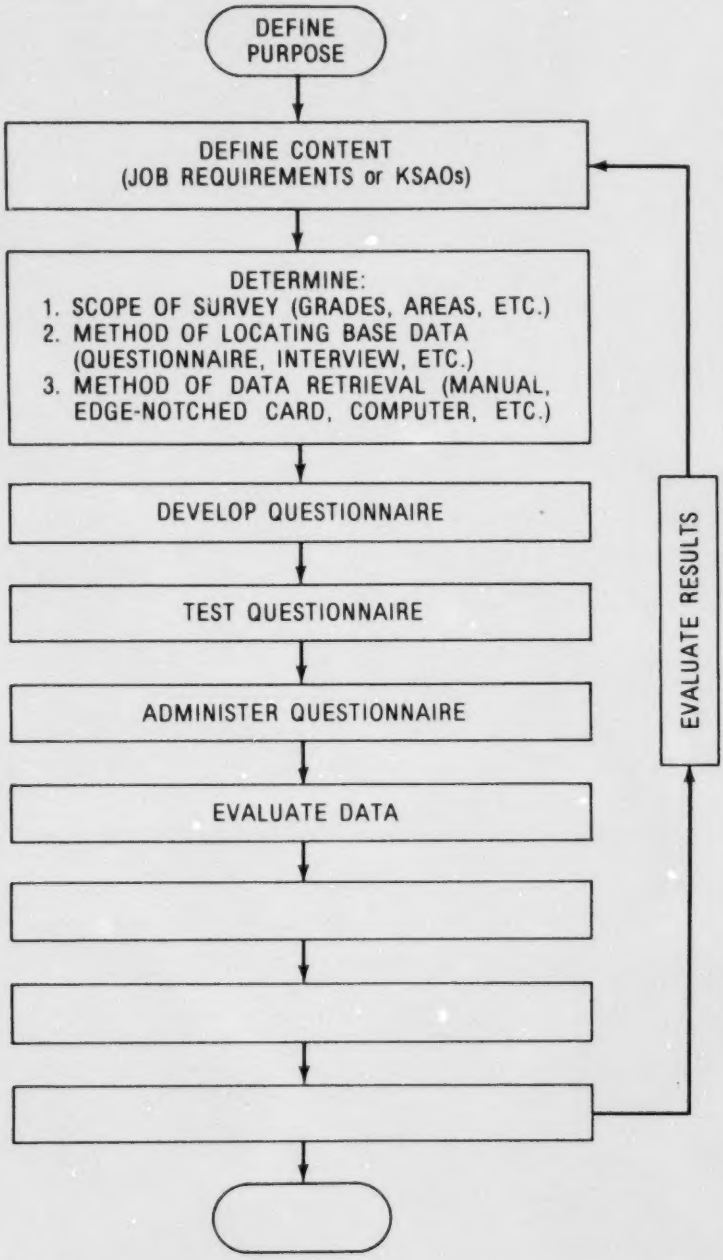
Skills Survey Process Flow Chart

Planning and Execution Phase


DEFINE PURPOSE
DEFINE CONTENT (JOB REQUIREMENTS or KSAOs)
DETERMINE:
1. SCOPE OF SURVEY (GRADES, AREAS, ETC.)
2. METHOD OF LOCATING BASE DATA (QUESTIONNAIRE, INTERVIEW, ETC.)
3. METHOD OF DATA RETRIEVAL (MANUAL, EDGE-NOTCHED CARD, COMPUTER, ETC.)
DEVELOP QUESTIONNAIRE
TEST QUESTIONNAIRE
ADMINISTER QUESTIONNAIRE
EVALUATE DATA
EVALUATE RESULTS

I. The What, Why and Purpose

What Is a Skills Survey?

A skills survey is the comprehensive collection and examination of data on the workforce to determine the composition and level of employees' skills, knowledges, and abilities so that they can be more fully utilized and/or developed to fill the staffing needs of the agency. As used in the following pages, a skills survey may at times be the **process** of **collecting** data and at other times the **product** as represented by a **collection** of data in a variety of forms. To be effective, skills data must also be arranged in such a manner that the information gathered can be readily accessible for management use.

Why Have A Skills Survey?

The Federal Government, as the nation's largest employer, needs a great variety of skills to fill the job requirements for an almost unlimited range of occupations and crafts. Considering these vast talent needs of the Federal Government and a public commitment to fully utilize every available resource, agencies must, to the extent feasible, assure that all Federal employees are assigned responsibilities commensurate with their skill and talent levels.

Quite often the success of an organization depends more on the commitment of its employees to their work than on any other single factor. This commitment is strengthened when people can fully apply to their tasks their education, training, and capabilities. Conversely, failure to let an employee use his or her abilities, training, or education results in discontent, frustration, low productivity, and often, loss of service through absenteeism or "quits".

It is evident then, for the benefit of both the employee and the employer, that agencies should identify underutilized skills and talents and develop means and opportunities for their use. On August 8, 1969, the President in Executive Order 11478 directed that each agency ". . . utilize to the fullest extent the present skills of each employee." He also made clear that ". . . equal opportunity applies to and must be an integral part of every aspect of personnel policy and practice in the employment, development, advancement, and treatment of civilian employees of the Federal Government."

The Civil Service Commission, empowered by the Equal Employment Opportunity Act of 1972 (P.L. 92–261), further directed agencies to "identify any underutilized employees, especially at the lower levels, and provide them with work opportunities commensurate with their abilities, training and education."

Initial affirmative action planning guidelines issued by the Civil Service Commission (CSC Bulletin 713–25, July 1972 (expired) and

FPM Letter 713–22, October 1973) contain brief examples of certain actions that agencies could take to achieve the full utilization of the present skills of their employees. Two of the suggested actions were to:

1. Conduct surveys of underutilized or nonutilized skills available in the existing workforce.
2. Establish "skills banks" to match underutilized employees with available job opportunities.

These suggested action items become an integral part of an agency's Upward Mobility program. In FPM Letter 713–27, (Upward Mobility for Lower Level Employees, June 1974) CSC advised agencies planning their Upward Mobility program to review the skills of lower level employees in conjunction with the analysis of current and projected vacancies. The early assessment of skills of the workforce is one of several interrelated components of an Upward Mobility program such as identification of target jobs, assessment of training needs, career counseling, establishment of a job related selection system, training design and delivery, and program administration, monitoring, and evaluation.

As further guidance on these recommended action items, this handbook is written to assist agencies in the planning, implementation, possible applications and special considerations of a skills survey within an Upward Mobility program. It is important to remember that a skills survey is a **management tool** for making current information on employees' knowledges and skills more easily accessible. In addition to its usefulness in Upward Mobility programs, a skills survey should be an integral part of any personnel management system. A skills survey is **part** of that systematic management effort that focuses Federal personnel policy and practices on the development and implementation of specific career opportunities for lower grade employees (below GS–9 or equivalent) who are in positions or occupational series which do not enable them to realize their full work potential.

What are the Primary and Secondary Functions of a Skills Survey?

At a minimum, a skills survey should seek to identify those lower level employees in positions with limited career potential who seek advancement and possess the skills that could be put to **immediate use** in the employee's own agency. This could be achieved either through opportunity for placement in vacant higher grade positions or in lateral assignments to positions with known potential for advancement.

Agencies should also consider other uses for their skills surveys. A skills survey can help to identify those employees who could be quickly trained for target jobs by upgrading their little-used skills or enhancing their minimum qualifications.

A skills survey can also help to identify those employees who lack minimum qualifications but have an interest in targeted Upward

Mobility positions. Such employees would require more extensive Upward Mobility training in conjunction with appropriate career counseling in order to qualify for projected position vacancies.

It should be remembered that a skills survey can help to identify employees seeking advancement who possess **some** of the skills and knowledge needed in higher level jobs. However, the survey cannot measure their ability to acquire and apply the additional skills and knowledge required to satisfactorily perform higher level work. Since this ability to acquire these additional skills and knowledge is the basis on which selections for upward mobility target jobs is based, other assessment tools must be used to measure employee potential. (Further guidance on selection systems will be forthcoming as a separate volume in the Upward Mobility Planning guide series. Agencies should also refer to the FPM Supplement 335-1, "Evaluation of Employees for Promotion and Internal Placement", Handbook X-118, *Qualifications Standards for White Collar Positions under the General Schedule* and Handbook X-118C, *Job Qualification System for Trades and Labor Occupations*).

Armed with comprehensive data on employees' skills, career interests, and advancement problems, the agency will be in a better position to plan for personnel needs, to determine training requirements, to restructure career ladders and jobs, and in general, to design a better Upward Mobility program.

The skills survey can be very effectively used as a basic document in career counseling by identifying employee strengths and weaknesses in the skill areas needed by the agency. Employees then can be more realistically advised about the opportunities open to them in the agency at their current skill level or with additional qualifications.

The survey could also be designed to uncover systemic problems in the agency that the employees perceive as preventing them from advancing.

II. Who's Involved

Who Is Involved In Planning And Implementing A Skills Survey?

The planning and implementation of a skills survey can not occur in a vacuum; it must include as much input as possible from the people who will be affected by it. Different agencies have assigned varied roles to individuals for carrying out the surveys, based on agency needs and organizational structure. Most agencies have included, to varying degrees, the participation of top level managers, the personnel director and staff, the EEO officer, supervisors, and employee representatives.

Top Level Management

First and foremost, top management's support must be actively assured. Without the commitment to budget for the cost of the skills survey and the use of information generated, the entire project may be doomed to failure.

> *Top management's support at the Internal Revenue Service led to the commitment of seventy-seven staff years to enable first line managers to conduct a skills survey of lower grade personnel. At the National Institutes of Health, management's decision to limit outside hiring into lower grade jobs until a search had been made of qualified candidates in the Opportunity Skills File has contributed greatly to the credibility of the skills survey. At the National Oceanic and Atmospheric Administration top management has participated in the planning stage of the skills file and Upward Mobility program. Other agencies have found that when management actively commits itself to inhouse placement and enforcement of merit principles, then employees respond with more active participation in the skills survey, more accurate and complete reporting of skills information and more consistent reporting of newly acquired skills.*

Personnel Staff

In order for the skills survey to be more than a sudden flurry of activity that is soon forgotten and neglected, it must become an integral part of the agency's personnel management system.

> *At NIH, personnel management specialists were assigned to interview the agency's lower level employees. In other agencies, the personnel staff has worked closely with the planning of the survey, and in some instances, assumed responsibility for implementation.*

The Personnel Office's role generally is to provide staff assistance to the survey effort, maintain records, issue letters about the survey, operate the retrieval system, etc.

EEO Officer

In many agencies the Upward Mobility Officer has responsibility for the coordination and implementation of the different elements of the skills survey. In this instance the support and participation of the Spanish Speaking and Federal Women's Program Coordinators should be solicited so that special emphasis programs can benefit directly from the skills survey programs. The EEO Officer should participate in all planning sessions and be consulted for comments on the drafts of the survey. The EEO Officer can also suggest ways to conduct the survey so as to elicit the fullest participation of the employees.

Supervisors

Supervisors' support and understanding of the skills survey can affect the participation of employees. In some agencies, the supervisors are responsible for distributing the skills survey and insuring its completion.

> *At NOAA, supervisors were helpful in identifying those positions with limited career potential. At the National Park Service, supervisory appraisal of employees' skills is an integral part of the survey.*

At a minimum, supervisors' support is needed to arrange work schedules for employees to be interviewed or to complete the questionnaire.

Line Managers

Line managers are involved in the skills survey in the planning stages as well as in the skills evaluation stage.

> *At IRS first line managers are responsible for interviewing and counseling employees interested in Upward Mobility. At NOAA line managers are members of the interviewing team which selects candidates for the Upward Mobility program from among those initially identified through the computerized skills file.*

Technical Specialists

Technical specialists, or people who are intimately familiar with the skills required to perform the targeted positions, may be a valuable source of information when designing the questionnaire. They can also assess the relative value of certain types of experiences for their particular jobs and can serve as career advisors for employees.

Regional Offices

When an agency with diversified missions is spread out nationwide,

and the skills survey will be used throughout the agency, then input should be sought from each regional office at every stage of planning.

Employees or Employee Representatives

It is valuable to have employees comment on the understandability and design of the draft survey in order to insure maximum employee participation.

III. What Data and How Do You Get It?

What Skills Information Should Be Gathered?

Planners should relate the skills inventory information sought to previously defined survey purposes. The level and extent of employees' skills pertinent to the job requirements of the anticipated position vacancies will be of primary interest but other data may also be gathered.

At this point, survey planners may be asking: What is a skill? The term "skill" is used broadly in this handbook, encompassing those areas that are commonly known as KSAOs—knowledge, skill/ability and other characteristic/circumstance. Definitions of these terms follow:

> *Knowledge—An organized body of information usually of a factual or procedural nature. Knowledge may be either "knowing* about *something" (as in knowledge of cost-based budgeting principles) or "knowing* how to do *something" (as in knowledge of how to prepare a cost-based budget, given . . .).*
>
> *Skill/Ability—The power to perform an activity at the present time. Examples would be "ability to operate an electronic calculator" or "typing skill." Skills generally result from a combination of basic abilities and their augmentation by formal training and practical experience. The term ability is used in the more generalized sense of capacity to acquire skills.*
>
> *Other Characteristic/Circumstance—With regard to the job, this is something other than a knowledge, skill or ability which an individual must have in order to perform a job. Willingness to travel falls in this category. If the individual lacks this characteristic or circumstance, it will detract from one or more job tasks. It is important to distinguish between the two terms, because a circumstance is more* likely to change than a characteristic. *A characteristic is a predisposition on the part of an individual, a physical or mental trait. An unwillingness to travel due to a fear of flying or a dislike for spending any time away from home would fall in this category. A circumstance is something in the environment of an individual which precludes him or her from doing something. Unwillingness to travel because of responsibilities to an invalid spouse or inability to work an early shift due to lack of transportation fall into this category.*

Agency planners should then determine which "skills" (KSAOs) are needed by the agency and, in particular, in the positions that might be filled through Upward Mobility.

To do this, they may use either of two approaches which will identify the types of KSAOs needed.

1. **Examine the Qualifications Standards for White Collar Positions under the General Schedule (Handbook X–118)** for the job requirements of current and projected position vacancies, *or*

2. **Perform a job analysis** including consultation with supervisors of and persons occupying the positions to sift out those KSAO's that are really pertinent to successful performance on the job. One method of such analysis is the "Job Element" Technique. The application of this technique is explained in "How to Prepare and Conduct Job Element Examinations", Technical Study 75-1, prepared by the Personnel Research and Development Center of the Bureau of Policies and Standards at the Civil Service Commission.

By using these approaches, survey planners can get a more accurate idea of the kinds of skills (including the length and type of education and experience) that are necessary to satisfy the minimum qualifications for the agency's position vacancies. With this information, they can design a survey that is more effective in meeting staffing needs.

The skills inventory information should be detailed and measurable enough that it will assist the agency in determining the levels and types of KSAOs of its employees. The planners, however, should take care to identify only those factors that are directly relevant to actual execution of job duties and not to identify traditional requirements (such as a college degree) unless these are specifically called for in the qualification standards.

Agencies may initially want to design their survey to search only for a limited range of KSAOs that might fill short range and immediate manpower needs. Later they may decide to modify the design to accommodate the needs of more long-range planning. Other agencies may want to design such a comprehensive survey at the onset. In either case, it is best if the survey design is flexible enough to adjust to the changing needs of the agency.

How Can The Skills Be Obtained Most Effectively?

Depending on the positions targeted for upward mobility purposes, employees to be surveyed can be limited to those grades yielding the greatest returns. For example, the survey may be limited to:

1. grades 5-8 to locate fully qualified employees who are underutilized to place them directly in positions with known potential for advancement.
2. grades 4-7 or 8 for employees with minimal qualifications but who seek advancement to be placed in paraprofessional, technical, or "bridge" positions.
3. grades 1-5 for employees presently with clerical or secretarial skills to be referred for administrative support jobs.

4. any combination of the above.

Even if all employees are going to be eventually surveyed, it is advisable to move gradually and carefully, frequently grade by grade or one specific series at a time, in order that expectations not outstrip probable results.

NIH found that personnel limitations restricted them to surveying a few grades at a time spread out over a period of several months. This type of planning enabled them to do the kind of careful indepth personal interview that increased the validity and credibility of their skill file.

NOAA limits its survey to employees in grades 1-7 who are in job series that have been analyzed as having no career potential by supervisors. These employees are the appropriate candidates for an Upward Mobility Program.

Because they are developing a complicated computer based system, IRS is initially limiting the computer analysis of their skills inventory to their Southwest Regional Office in order to work out any possible problems in their system.

Some agencies have tried to encourage all lower grade employees to participate while others have limited the survey to employees who have an interest in selected jobs. Most agencies have also included in their surveys only employees who have been on the rolls at least nine months.

The number and groups of employees to be surveyed will vary from agency to agency, depending on how it plans to use the skills survey and the financial constraints of the agency.

What About Timetables?

It is highly advisable that timetables be laid out in the beginning of the planning stage with responsibilities designated and due dates set. Evaluation of progress made on the deadline dates will carry forward the impetus of the initial planning.

Depending on the complexity of the survey, agencies have found a range of from six to eighteen months necessary before full functioning of the skills survey can be achieved.

"Full functioning" of the survey implies **utilization** of the skills file information in ways visible to the agency. The problem of the skills survey's credibility to management and lower level employees will only be aggravated by a lack of, or delay in, its use. If the size of the survey or the availability of staff is such that survey information can not be gathered, coded, and **put to use** relatively quickly, it may be desirable to divide the agency and begin by surveying only selected series, grade levels, or organizational segments.

How Can The Needed Information Be Located?

Once the purpose and scope of the skills survey has been agreed

upon and defined, then the next step is to decide how to locate the needed information.

An agency might find that all the skills information it needs on employees is already on hand without the need for further questionnaires. If only a few people are going to be surveyed, then a questionnaire would not be suitable because of the time and cost of designing it.

Researching the personnel files might be a feasible alternative. The SF 171, performance appraisals, and promotion recommendations may contain sufficient information to identify underutilized employees. Training files and any existing skills files also may be helpful. Although researching these files can be a laborious, expensive procedure when done for many employees, some agencies may find it practical when reviewing the skills of a small select group of employees.

Disadvantages To A Personnel File Search

A skills survey is only as valuable as the currency of information being collected, and many skills files fail in this regard. Reviewing the personnel files may yield information that is greatly out-of-date, sketchy, and incomplete. Many employees do not update their SF 171, and do not adequately describe their skills when they are initially hired. Records on training of employees are sometimes not kept current.

Because of financial constraints and limited personnel, some agencies have confined their skills search of personnel records to those employees who have baccalaureate degrees and are in deadended positions. This kind of search certainly locates a group of valuable underutilized employees but fails to find the employees with several years of responsible experience or other kinds of skills which equally qualify them in many instances for positions under consideration. If a skills survey is going to be conducted to fill anticipated position vacancies, it should be broad and flexible enough to locate employees with a variety of backgrounds.

Questionnaires

Questionnaires are used successfully to gain information that is difficult or impractical to obtain from personnel records, but that can be gathered in this manner. They are also useful tools when large numbers of employees are to be surveyed.

Once the purpose of the survey has been described, the survey population has been ascertained, and it has been determined that a questionnaire is the most effective tool to use, the next step is to define the categories of information needed.

Depending on the defined functions of the skills survey and the KSAO needs of the position vacancies, most agencies seek information in the broad categories of the employee's general characteristics (such

as name, current position and workplace, etc.), education, work experience, training, and skills. If the survey is to be used in career counseling, then a section on career interests would be helpful. If the survey is to be used to fill specific target positions for Upward Mobility, then the employees should be asked which positions hold interest for them.

If the agency wishes to identify training needs and/or systemic promotion problems, it might query employees on factors they believe are preventing them from advancing. A section on special recognition and awards also might be included. Some agencies may decide on other areas of needed information to fit their particular requirements.

When the broad categories of needed information have been determined, they should be arranged in whatever order seems most logical and appropriate. A questionnaire may have to be shortened and some categories eliminated. Developers of questionnaires should make certain, however, that they do not confuse conciseness with brevity by eliminating important categories whose exclusion will seriously impair the questionnaire's effectiveness. They should consult with appropriate specialists for ideas about questionnaire construction.

How Will The Questionnaire Be Administered?

One method of administering the questionnaires involves direct contact with the employee in a personal interview. The interviewer may use a standardized questionnaire form, asking the respondent each question on the form and recording the answers. Agencies using the personal interview method to administer skills survey generally use this opportunity to do career counseling with the employee. The interview session then becomes more open-ended and flexible to the needs of the employee.

> *Agencies have designated different types of employees to conduct the interviewing. At IRS, first line managers were each responsible for the interviewing and concomitant career counseling of a group of employees. At NIH, personnel specialists conducted the interviews. In any case, care should be taken to train the interviewers in the techniques and considerations of questioning lower level employees that will best elicit their confidence and cooperation.*

A second method of obtaining completed questionnaires is to administer the survey to groups of employees during the workday with a survey leader present to explain its purpose, the intended use of the data collected, and to answer any questions.

A third possible method of obtaining completed questionnaires is to distribute the form to employees, requiring them to complete and return it. With this method, the employees should have easy access to their supervisors or to the personnel office for answers to any questions they might have about the survey.

A fourth possible alternative is to distribute the questionnaire to employees and conduct followup interviews either with all employees submitting the form, or with those employees who have been identified as having underutilized skills or desire for advancement.

At the Bureau of Engraving and Printing, the skills survey was restricted to those interested in the targeted Upward Mobility positions, making the survey small enough to individually career counsel each surveyed employee. At NOAA all employees in deadended jobs were surveyed but only those referred to the Upward Mobility program were given group and individual career counseling sessions.

A decision as to the best method of administration of a questionnaire can be made only after a review of the advantages and disadvantages of each method. The following evaluations of the methods are based on the methods themselves, assuming optimum wording of the items and optimum administrative conditions.

Advantages Of The Personal Interview:

1. It yields a high proportion of usable, completed questionnaires that cover the survey population.
2. It permits the interviewer to clear up any misunderstanding or misinterpretation of the interviewee by repeating or rephrasing questions.
3. The interviewer is trained to help the employees recall skills that they might have overlooked or discounted, such as an accounting course taken last year at a local college or the bookkeeping they handle for their church.
4. Career counseling or the annual performance review can be included in the personal interview of the employee during a skills survey.
5. An interview raises employee morale by indicating that the agency is taking a personal interest in him or her.

Disadvantages of The Personal Interview:

1. The less structure there is in the form used by the interviewer, the more difficult it is to code the information obtained. The variety of responses given free-answer questions does not always lend itself to coding methods which facilitate retrieval.
2. The reliability of a questionnaire completed during a personal interview is possibly lower than the reliability of a form filled out by the respondents themselves. The interviewer, in explaining terms or in adapting his/her language to the particular interviewee, may consciously or unconsciously affect the latter's responses; a reinterview by another person might yield different results.

(Note: the two disadvantages above can be minimized through the proper training of interviewers in interview techniques and in the coding of information gathered.)

3. Personal interviews are very expensive. They are time-consuming and require a staff of trained interviewers as well as an organization capable of properly selecting, training, and supervising the interviewers.
4. Personal interviews take more of the employee's time than other methods. This adds to the general cost of the interview.

Advantages of Group Administration:

1. Will generate employee cooperation as result of face-to-face contact with a survey leader and direct communications regarding the purpose and intended use of the survey results.
2. Makes it feasible to schedule a manageable group of employees individually, by occupation, or by sub-units of the organization and deal with questions on a group and individual basis.
3. Assures greater accuracy in the completion of the questionnaire and increases the rate of response.
4. Makes follow-up easier because of the initial personal contact and the record of attendance. Employees not in attendance are more readily identified and contacted thereafter.

Disadvantages of Group Administration:

1. May not be feasible in all situations because of size and distribution of the workforce.
2. Takes considerable amount of staff time to arrange, conduct, and do necessary follow-ups on the sessions.
3. Disruption of the work schedule of a number of employees at one time occurs.

Advantages of Mail Questionnaires:

1. This permits a broader geographical area and larger number of employees to be covered at less expense than is possible with personal interviews. The lower cost will not necessarily apply if personal followups are made.
2. The expense and time necessary to insure a staff of trained interviewers are eliminated. Much of the work involved in mailing inquiries can be done by a clerical staff.
3. The questions are standard for all employees.
4. Employees can complete the form at their convenience and take as much time as they want to fill it out.

Disadvantages Of Mail Questionnaires:

1. Many mail inquiries are not returned. This raises the problem of incomplete coverage of the targeted employees.

2. Many mail inquiries are not usable, either because they are incomplete or because the responses are not legible or understandable.
3. The length and appearance of a questionnaire can influence its effectiveness. A form which looks too complicated or too long tends to discourage completion and return.
4. Respondents might underrate themselves or neglect to remember some of their skills.
5. Without personal contact with the users of the survey, employees may be more suspicious and skeptical about the actual utilization of the questionnaire.

Advantages Of Mail Questionnaires With Followup Interview:

1. The use of a questionnaire helps to screen down the number of eligible employees to a more manageable group that can be interviewed most cost-effectively.
2. The follow-up interview increases the credibility of the skills survey.

Disadvantages Of Mail Questionnaires With Followup Interview:

1. Employees may remain skeptical about the credibility of the survey and inaccurately complete or not return the forms.
2. Employees, who do not submit the form or who do not opt for upward mobility consideration, are overlooked for career counseling.

Despite the disadvantages of mail questionnaires cited, we should point out that the response rate to many of them is good. It undoubtedly depends upon a combination of factors—the group surveyed, the relevance and quality of the questionnaire, the persuasiveness of the covering letters, etc.

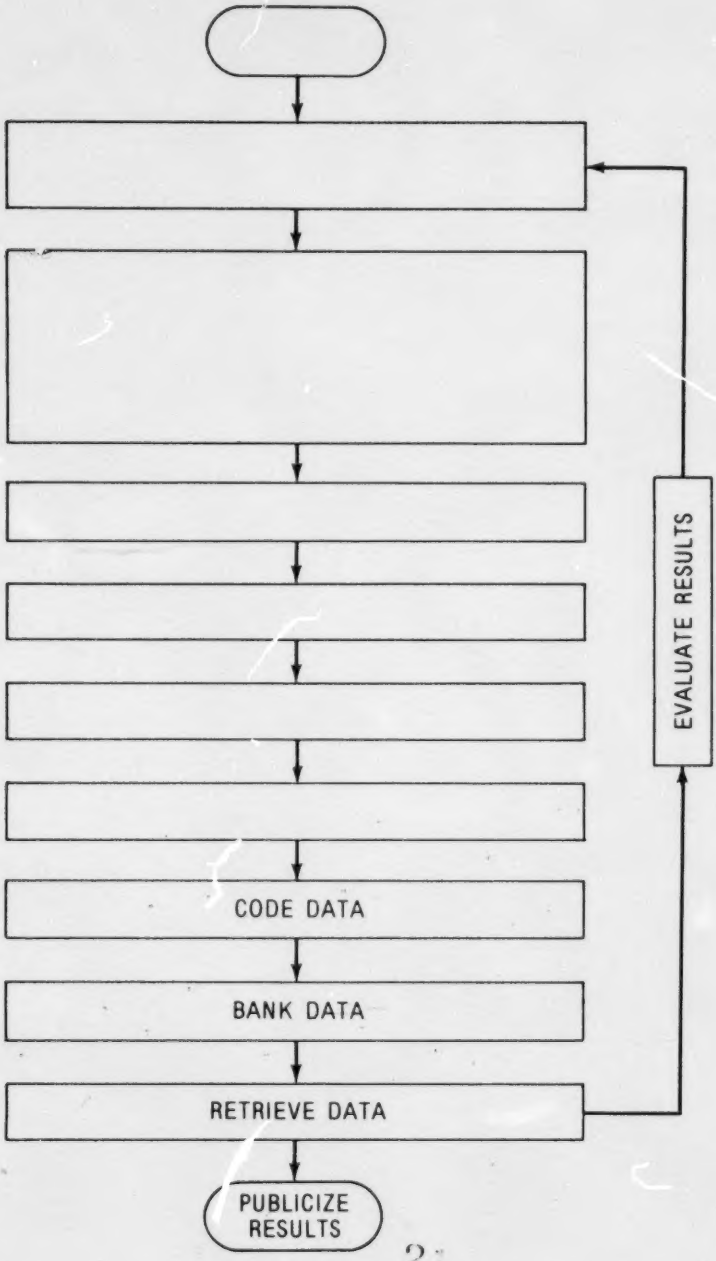
Whether the form is filled out by an interviewer, or whether it is sent through the house mail, it must be easy to use and this will depend on a number of factors, e.g., physical appearance of the form itself, the arrangement or order of the questions, clarity of directions, and the form of the questions. Confusing or complicated directions or a jumbled appearance will tend to discourage respondent cooperation. However, when the form appears to be simple to complete, an employee is more likely to respond carefully, and consequently more accurately. It is also true that in using a form which is confusing to follow, an interviewer may have difficulty establishing or maintaining good rapport with the employee.

IV. How to Evaluate the Data

Basic policy and procedures concerning qualifications evaluation may be found in FPM Chapter 337 and in *Handbook X-118, Qualification Standards for White Collar Positions Under the General Schedule (Part II, Section II Crediting Experience)*. In addition, procedural instructions for evaluating existing qualification of present employees of the Federal government are given in Appendix 1 of this handbook. These procedures should not be confused with merit-based selection procedures which evaluate the relative qualifications of various applicants for entry into Upward Mobility programs.

Skills Survey Process Flow Chart

Utilization Phase



V. How to Code the Data

Planning for coding and analysis of data is a continuing consideration when making decisions about the types of skills to be included, their arrangement, and the layout of the questionnaire.

In order to extract skills data from completed questionnaires in an orderly and accurate way, a coding system should be devised to cover critical items on the questionnaire form. Such a system consists of assigning numbers or symbols (letters or abbreviations, etc.) to each possible answer. Classification and collection of information on employees then becomes a relatively simple operation.

The survey planners must make two basic decisions concerning the coding system:

1. **What information should be put in coded form?**
   Only information that is going to be used as principal determinants in the initial identification of underutilized employees needs to be coded. Some subject areas that could be practicably coded are:
   a. Level of education (grade completed, semester/quarter hours successfully completed, degree);
   b. Major areas of study or training (beyond high school and agency–related);
   c. Specific agency–related skill areas (current and desired)
   d. Career interests related to the agency;
   e. Preferred and acceptable work locations;
   f. Willingness to accept lateral reassignment and/or downgrade;
   g. General factors preventing advancement
   h. Training needed for advancement to career goals (information gained through career counseling sessions);
   i. Willingness or availability to train off-the clock, if necessary.

The agency should code those areas that it regards as critical factors in determining the minimal qualifications for the selection of employees. More detailed and complete information on the employee's work history, education, and how skills were acquired can be included in the survey questionnaire or can be found and verified in a followup interview or by reviewing the personnel files.

The specific kinds of codes to use depend upon the type of retrieval system selected. Various retrieval systems are discussed in depth in Appendix 2, **Suggested Methodologies for Data Storage and Retrieval.**

VI. Conducting, Implementing, and Updating

How Should Planners Publicize The Skills Survey To Stimulate Full Employee Participation?

Survey planners should make a particular effort to effectively publicize the skills survey. Many employees never respond to surveys of any type because they see them as infringing on their privacy, being of little benefit for themselves, and having possibly negative repercussions if they are not answered "correctly". The survey will only succeed if the employees are fully impressed with the importance and advantages of accurately and completely filling out the questionnaire and participating in the interviews.

Employee interest in the survey can be raised by an article in the house organ or the union newsletter, outlining the nature and purpose of the survey and how it will identify employees with underutilized skills.

Supervisors should, of course, encourage their employees to participate in the survey. This is one way supervisors could actively demonstrate support for agency EEO efforts.

Discussion of the survey at union meetings can also help to convince employees of the survey's credibility and benefit to themselves. Group meetings with supervisors or personnelists can help answer any employee questions about the survey and will demonstrate upper level support for the program.

A cover memorandum accompanying the questionnaire, written in clear nonbureaucratic language stressing the benefits of filling out the form while making clear the realistic limitations of the survey, can make a great difference in the numbers of employees who participate. The memorandum should be carefully and sensitively worded to achieve a proper balance between encouraging employees to apply and not raising unreal expectations.

Besides publicizing the survey at its initial distribution, followup reports on employees placed as a result of the survey might be made in the house organ or union newsletter. Employees referred as possible candidates for position vacancies could also be personally notified. This kind of results-oriented publicity will raise the credibility of the skills survey, motivating employees to fill out the questionnaire for the first time and/or to update their file with new data.

Conducting The Survey: What If Someone Does Not Want To Participate?

After weeks of planning and full publicity about the survey, the time will come to actually conduct the survey. If the survey is sent

through the in-house mails, employees should be given a deadline by which to complete and submit the questionnaire. Employees who do not wish to participate should be given that option.

To protect management against employee complaints about their lack of inclusion in or ignorance of the survey, it may be desirable to have nonparticipating employees sign a statement stating that they do not wish to take part in the survey. Alternatively, these employees could be personally counseled by the personnel office. In any event, employees should be given the opportunity to participate at a later date if they so desire.

Documenting The Findings: How Should The Data Be Verified?

Because of the prohibitive amount of personnel time and expense, most agencies will find it impractical to verify every skill claimed by an employee and entered into the skills bank.

Entering all skills claimed without minimal verification is much more economical but often results in more errors not so much because of intentional dishonesty but because employees may over or under estimate their skill level. This is not an insurmountable factor if the skills file is intended merely to provide leads to candidates. It may still be desirable to spot check some of the files for accuracy. Critical data may also be quickly verified when filing a copy of the questionnaire in the employee's Official Personnel File to keep up-to-date information of the employee available for promotion review. Brief interviews may be conducted with employees to clear up any marked discrepancies.

The skills of potential candidates screened as having minimal qualifications for position vacancies can be more carefully verified and documented by reviewing the complete Official Personnel File, by conducting personal interviews, or by using other methods of assessment.

Analyzing The Findings: What Is The Skill Level Composition Of The Lower Level Workforce?

With all the data gathered and documented, evaluation of the findings can begin. Depending on the purposes of the survey and the design of the storage and retrieval system, analysis should seek the answers to these questions:

—What kind of Upward Mobility program does the agency need, considering the skill level composition of its lower level employees?

a. Which underutilized employees are fully qualified for current and future position vacancies in the agency?
b. Which underutilized employees need only brush-up or refresher training to be fully qualified for position vacancies?
c. Which employees have a lack of qualifications but have a desire to gain new skills and change jobs?

—What are some of the training needs of employees that fall outside of the realm of Upward Mobility training (such as G.E.D. preparation, skills upgrading, etc.)?
—What are some of the counseling needs of employees as identified through the skills survey information?

How Can The Findings Be Implemented?

Employees who are identified as fully qualified and underutilized through the skills file may be referred as possible candidates for vacant professional positions or for openings in more upwardly mobile job series. According to FPM Chapter 335 (Promotion and Internal Placement), candidates for position vacancies can be located either by searching through a skills file and/or by posting vacancy anouncements. It is most desirable to use both methods in combination because of the weaknesses of each in locating all available qualified candidates.

Employees who need only refresher or minimal training to qualify for position vacancies should be personally counseled as to the available means for obtaining the necessary training and in the standard procedures for applying for position vacancies. As their skills are upgraded, they too could be directly referred as possible candidates for vacancies. They may or may not need more systematic support and further evaluation so that their career goals can be more closely meshed with agency needs.

Employees who lack qualifications but have an interest in Upward Mobility should undergo extensive assessment of their potential for acquiring and using skills needed in the target jobs. The skills file helps to identify them so that they can be personally notified of application procedures and deadlines for the Upward Mobility positions they expressed interest in.

Information on the training needs of employees can be referred to the training or education office of the agency so that they can plan their programs to better serve the employees.

Employees who feel that there are specific factors keeping them from advancement, or who desire advancement but are not clear on specific career goals, can be referred for career counseling. The skills questionnaire will serve as an excellent base document for more effective career counseling.

With a total picture of the skills level of the lower level workforce, Upward Mobility planners will be better to design an Upward Mobility program that meets both the agency's and employees' needs.

Updating The Survey

It is critically important for the continuing utilization of the skills-file to keep the information current. Individual employees should be encouraged to update their files whenever they gain additional training,

experience, education, or skills. Systematic updating of their files should also be done at least once a year, perhaps during the employee's annual performance evaluation. The storage and retrieval system should have a means for purging the files of employees who leave the agency or who no longer wish to be part of the skills file.

VII. Skills Surveys and the Privacy Act—Public Law 93-579

The purpose of the Privacy Act is to give individuals the right to review records about them that are maintained by agencies and to prescribe rules for the collection, use, and exchange of information about individuals. Skills surveys contain a name and personal information regarding an individual; therefore, the skills survey system of record (or file) is subject to the provisions of the Privacy Act.

Briefly outlined, agencies should be aware: that the use, authority, and disposition of the skills file should be published in the Federal Register; that a privacy statement must be included in every skills survey questionnaire or interview; and, that a record of disclosure must be kept.

Keep in mind that the Privacy Act of 1974 requires that Federal agencies make certain that any record of identifiable personal information is current and accurate for its intended use. It also allows for individuals to bring a civil action against an agency for failing to comply and thus possibly making determinations that are adverse to the individual. This makes it doubly important to make sure that the skills file is kept both current and accurate.

Some agencies have included the skills surveys under a blanket personnel system of records for compliance with the Privacy Act.

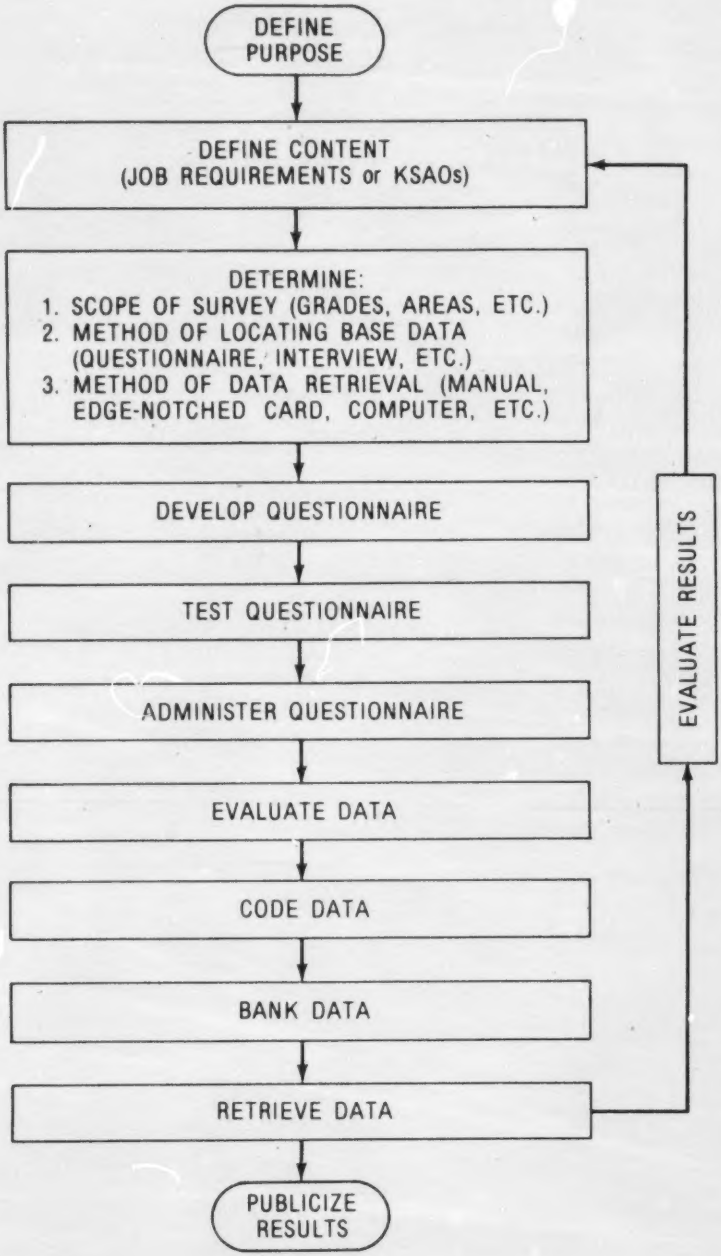
Agencies using skills surveys should contact their agency Freedom of Information and Privacy Acts Officer for instructions in complying with the Act.

VIII. Administrative Pitfalls And How to Avoid them

What Are Some of The Major Failings of Some Skills Surveys?

1. Information not utilized.
   Solution: Seek management and personnel office support and include them in the planning **from the beginning.** Carry through on plans for implementation.
2. Only education and training data are gathered; experience and skills data are not gathered.
   Solution: Design the questionnaire so that skills and experience needed in anticipated position vacancies can be identified, regardless of how they were acquired.
3. Questionnaires are so complex and confusing that few employees participate in the survey.
   Solution: Consult with your agency Forms Manager concerning the design of the questionnaire in order to make it both easy for the user as well as for the recipient. In addition, conduct a pilot survey of a small group of employees to get their feedback on understandability and design of the questionnaire. Make necessary revisions and check again for any comprehension problem.
4. Employees are unclear about or suspicious of real nature of survey.
   Solution: Effectively publicize the survey emphasizing how it will be utilized to both management's and employees' benefit.
5. Information not able to be retrieved.
   Solution: Be sure an effective coding and retrieval system is planned for in conjunction with the design of the questionnaire. Once again, check with the agency Forms Manager. Proper placement and sequencing of information on the questionnaire will greatly aid in coding and putting data into the storage and retrieval system.
6. Information not kept current.
   Solution: Make updating of information a regular part of the annual performance appraisal. Publicize placements resulting from utilization of survey to encourage employees to update their file whenever new skills are acquired.

Skills Survey Process Flow Chart



Appendix 1

Procedural Instructions for Evaluating Existing Qualifications of Present Employees of the Federal Government

1. **Credit for Unpaid Experience or Volunteer Work**
   Credit must be given for qualifying unpaid experience or volunteer work such as community, cultural, social service, and professional association activities, on the same basis as for paid experience. Credit is given on the basis of the actual number of hours spent in these activities. Employees engaged in somewhat pedestrian duties during their work-day frequently take on outside activities with responsibilities well beyond their regular work assignments. Examples are: Union activities, responsible participation in community affairs, directing fund-raising organizations, directing responsible segments of fraternal, charitable, or veterans' organizations.

2. **Crediting Education**
   a. **Education in Accredited Colleges.** Some qualification standards include a requirement of education completed in an accredited college or university. Accreditation of a college is granted by:
      1. A regional accrediting association; or
      2 A State Department of Education, State Accrediting Commission, or State University.

   b. **Education in Nonaccredited Schools.** The successful completion of college study in nonaccredited schools may be accepted in lieu of undergraduate education in an accredited college if there is appropriate evidence that the education was of acceptable quality or that the candidate has acquired the knowledges and abilities required for the work. One of the following criteria may be accepted as appropriate evidence of the quality of the education or that the candidate has the required knowledges and abilities:
      1. The specific courses have been accepted for advanced credit by an accredited U.S. college or university;
      2. The institution is listed in the Education Directory, College and Universities published by the National Center for Education Statistics, U. S. Department of Health, Education, and Welfare. The part of the Examining Systems Manual covering "Education in Nonaccredited Schools" is being changed. However, it is currently only in draft form.
      3. A State university (U.S.A.) reports the institution as one whose transcript is given full value, or full value in subject areas

applicable to curricula at the State university (refer to Report of Credit Given by Educational Institutions published by the American Association of Collegiate Registrars and Admissions Officers, 1 Dupont Circle NW, Washington, D.C., 20036, $5.00);
4. The curriculum is accredited by a professional organization recognized for accreditation by the U.S. Office of Education or The Council on Postsecondary Accreditation.
5. The candidate presents evidence which clearly justifies a high evaluation of his or her competence such as one of the following:
   a. Registration as a professional engineer or architect; or
   b. A substantial record of experience, achievement, and publications in the appropriate field.

c. **Foreign Education.** Foreign education is credited in a manner similar to the way we credit education from nonaccredited schools. That is, the applicant is responsible for providing us with evidence he or she has the required knowledges, skills, or abilities. For foreign education the existing criteria for evaluating education in nonaccredited schools would be slightly modified to include the following evidence:

1. The specific courses have been accepted for advanced credit by an accredited U.S. college or university;
2. A State university (U.S.A.) reports the institution as one whose transcript is given full value or full value in subject areas applicable to curricula at the State university;
3. The curriculum is accredited by a professional organization recognized for accreditation by the U.S. Office of Education or The Council on Postsecondary Accreditation.
4. The candidate submits an evaluation of the coursework from an accredited U.S. college or university or from an organization recognized as specializing in interpretation of foreign educational credentials;
5. The candidate presents evidence which clearly justifies a high evaluation of his or her competence, such as one of the following:
   a. Registration as a professional engineer or architect;
   b. A substantial record of experience, achievement, and publications in the appropriate field.

There are three private organizations we know of that evaluate foreign education:

1. Credentials Evaluation Service, Inc.
   P.O. Box 24679
   Los Angeles, California 90024
   It was founded by the International Research Foundation and is incorporated in the State of California as a nonprofit public service. The Service charges a fee of $25 (difficult evaluations may cost up to $50) to evaluate educational credentials and to

furnish a statement of equivalency to people who have studied outside the U.S.A.

2. World Education Services, Inc.
   Educational Equivalency Evaluations
   P.O. Box 602, Forest Hills Station
   Flushing, NY 11375

This service is incorporated in the State of New York as a non-profit corporation. They charge a fee of $20.

3. Office of Foreign Student Services
   102 East Hall
   Columbia University
   New York, NY 10027

Columbia University is an accredited private educational institution which provides an evaluation service through its Office of Foreign Student Services. Their fee is also $20.

d. **Home Study and Correspondence Course Education.** In line with general Commission practice that all pertinent experience and training should be considered when evaluating applicants, home study and correspondence courses which materially increase the capacity of the applicant to do the job to be filled should be considered and credited accordingly. Home study and correspondence courses are substitutable for required experience under the Commission's qualification standards when such study is accepted for credit by residence colleges, State universities, etc., or as specifically provided in the qualification standard.

3. **Crediting Experience and Training**

a. Experience and training is generally credited only to the date of receipt of the questionnaire. (Applicants are not given credit for experience and training not claimed on their questionnaire even though information obtained from other sources appears to indicate more extensive experience or training.)

b. If an applicant claims that experience gained in the Federal service was different in kind or level from that indicated by the official assignment, he or she should be requested to submit substantiating evidence if the experience claimed would affect the rating. Acceptable evidence might be an official documenut such as a copy of a Standard Form 50 or a memorandum or a statement from the agency based on official records showing that the applicant performed the duties claimed. In the absence of this evidence, a statement should be obtained from the Director of Personnel or other superior, certifying that reliable sources (other than the applicant) have been consulted and the writer is satisfied that the applicant performed the duties as claimed. Other evidence may be accepted in unusual cases if the office rating the paper is satisfied

that it is valid. In any case, the burden of proof rest on the applicant.

c. Some qualification standards or examining guides, or both, recognize a **recency factor** in evaluating experience and training because it has been established that, for some areas, recent experience or training is more valuable than remote experience or training. Consideration of this factor may be reflected in the rating process by penalizing stale or disconnected experience. In applying this policy to the rating of experience and training, no rating shall be reduced below 70 solely. In computing time which has elapsed in connection with recency requirements, an applicant shall not be penalized on account of military service or Peace Corps service that interrupted his or her civilian career. Time spent in the military service or the Peace Corps may be disregarded in making this computation unless it can be counted as qualifying in itself. However, a person who remained in the service through repeated reenlistments is considered as having civilian experience interrupted.

d. A Federal employee who was appointed or promoted on the basis of any valid standard (including those for superior academic achievement or under a training agreement) may not currently meet the open competitive requirements for the current (or previously held) grade level as far as length of experience or time in grade are concerned. These applicants should, however, be rated eligible for the highest grade held in the Federal service in the particular occupational series as well as for any lower grades which are available.

4. **Evaluating Military Service**

a. For persons entitled to veteran preference, credit must be given for time spent in the military service of the United States in whichever of the following two ways will be of more benefit to the applicant (or in a combination of both ways if that will be of most benefit):

1. The military service may be considered as an extension of the employment in which the applicant was engaged immediately prior to entrance into the military service. When military service is credited in this way, the applicant is considered to have continued performing the duties of the position he left throughout his military service. Military service may be credited in this way regardless of whether the applicant returned to the occupation he left.
2. The military service may be considered on the basis of the actual duties performed by the applicant.

b. Military service of nonpreference ex-service applicants is evaluated only on its own merits and may not be considered an extension of previous employment.

c. In applying the instructions in 6a above, an interruption of civilian employment has occurred if the applicant left employment in his regular occupation within 90 days prior to entering military service. If for some reason he accepted other employment, whether or not in his regular occupation, within the 90-day period, this has no effect except that the military service can be considered an extension of whichever employment will result in the advantage to the veteran.

5. **Evaluating Military Training Courses.** When evaluating education, credit is given for formal training courses taken in the military service as recommended in the Guide to the Evaluation of Experience in the Armed Forces, published by the American Council on Education.
6. **Credit for Correspondence Courses or Courses Offered by the Armed Forces Institute.** In the evaluation of education, such credit as the standard permits may be given to those released from military service who have received a certificate of completion from an educational institution for a correspondence course, or from the Armed Forces Institute for courses completed.
7. **Substitution of General Education Development Tests for High School Education.** A person who has obtained a General Education Development (GED) High School Equivalency Certificate or a High School Proficiency Certificate awarded by state or territorial-level Board or Department of Education is considered as having satisfied the high school education requirements in Handbook X–118 qualification standards. These certificates may be accepted in lieu of a high school diploma whenever high school graduation is a prerequisite in an examination or when education can be substituted as a part of the experience requirement.
8. **Evaluating Concurrent Education and Experience.**

   a. When qualifying education and experience have been gained concurrently, full credit is given for each in accordance with the time actually spent in each. When qualifying experience has been concurrently obtained in two separate positions, credit is given for experience in each position in accordance with time actually spent in each up to the limit of a full-time workweek. For example, if a person is employed half time as a Biological Aide in a State university and half-time as a Biological Aide for a commercial company, he or she is credited with full-time experience as a Biological Aide.

   b. In assigning credit for experience, credit is given on the basis of the regular workweek. No "straight time" additional credit is allowed for overtime, regardless of its length. When qualifying experience in a single general occupational area is shown to have exceeded the number of hours (or days) of a standard workweek,

it is considered as overtime experience, regardless of whether it was acquired under one employer or under two or more employers concurrently. This means that the person who works at two different positions concurrently, the experience in which would both be qualifying experience under an examination announcement, would not be credited for any experience beyond the regular workweek.

c. When qualifying experience obtained in overtime work under a second employer is of a broader or superior character in comparison with the main employment, this advantage is reflected in the quality level of experience for which credit is given, for actual time spent in the broader or superior employment when reduced to terms of standard workweeks, months, or years.

e. For positions in which the normal work year is less than the calendar year (teacher or professor employment, for example), the normal work year is accepted as equivalent to the calendar year for crediting experience, unless the qualification standard specifies otherwise. If a year of teaching experience is acceptable for one year of qualifying experience, no additional length will be credited if a teacher accepts summer employment and obtains two or three additional months of qualifying experience. If the qualification standard provides that teaching experience through a school year is acceptable for only nine months, an applicant who accepts three months of summer employment in which he or she acquires qualifying experience of the same or a different kind may be credited with a calendar year of experience.

Appendix 2

Suggested Methodologies for Data Storage and Retrieval

Collecting extensive data on employees' skills and career interests is only a part of the survey effort. It is equally important that planners devise a mechanism for screening the surveyed employees down to a manageable group (about 20–40 employees) which can be more effectively and carefully analyzed and evaluated. Too often questionnaires are distributed and collected only to lie unused in file cabinets because of the time and expense of going through them to locate employees with specific KSAOs and/or career interests that are needed by the agency. An efficient, easy-to-use, well-designed retrieval system can have a great effect on the extent of utilization of the skills file information in the implementation of the Upward Mobility program.

This section will offer several brief descriptions of different storage and retrieval systems which could be utilized by agencies in their skills surveys. The advantages and disadvantages of the most simple to the most complex systems will be discussed, so that planners will have a better idea of the alternatives available to them, particularly of the smaller noncomputer retrieval devices which are so often forgotten with the increasing use of computer technology. Whichever system is chosen, remember the cost of maintenance is equally as important as the initial installation cost.

Manual Search

The simplest and most basic search and retrieval "system" is the manual search, which employs no machines or devices to aid the analyst in screening the surveyed population. The analyst, or analysts, personally review each of the questionnaires and select out those employees whose qualifications best fit the needs of the agency. The analysts may be personnel specialists, or career counselors, or line managers, depending on the roles designated by the agency. After initial selection, the employees then may be referred for further evaluation.

Advantages of the Manual Search System

1. It allows careful, personalized attention to each questionnaire. Experience or skills that do not fit easily into categories can be considered in the selection of the employee.
2. With a small survey group, Individual Development Plans (IDPs) can be worked up for each employee according to his or her skill and interest level.

Disadvantages of Manual Search

1. Manual retrieval of information is laborious and expensive for a large survey group, because it is difficult for an analyst to keep account of and adequately evaluate the data on more than about thirty-five employees.
2. It relies heavily on the memory and judgment of the analyst who must be well trained in evaluating employees and selecting them according to established criteria.
3. It severely limits the opportunity to expand the size of the survey group and the possible applications of the survey.
4. Manual searching through all the questionnaires is usually only economically practical for a one-time survey. If the survey information is to be used for many different purposes or will need to be searched through several times, a more efficient retrieval system will, in the long run, be more cost-effective.

Edge-notched Card System

An unsophisticated and useful retrieval system is the edge-notched card. All the information on an employee is contained in the questionnaire in the body of the card. Items of information that are going to be used as selecting factors are coded by numbered notches along the edge of the card. The notches are made with the assistance of prepunched pilot holes. Notching permits selective sorting. By making several "passes" with a special long steel needle, the cards (each representing an employee) that meet the search criteria are selected. This is accomplished by putting the needle through the appropriate pilot hole position in a stack of cards and lifting the needle to allow the notched cards to fall out. If the employees are going to be selected on several criteria then a series of "passes" through several pilot holes will also have to be made. Since each "pass" is limited to the number of cards that can be fitted on the needle it may take several "passes" to locate the group of employees with the desired qualifications.

Advantages of the Edge-notched Card System

1. The edge-notched card retrieval system is inexpensive, costing about $50 for the equipment, and about $.20–.50 per card (cost at time of writing).
2. The searching mechanism is also the storage mechanism, eliminating the necessity of pulling additional files.
3. It is a quick and effective system for locating skills file information that can be easily used by anyone with little training.
4. Punching the notches and "passing" through the cards can be done by clerical help without the expense of professional outside assistance.

5. The system lends itself to the inexpensive procedure of self-coding of skills by employees.
6. File cards can be readily added or purged from the system and data can be added or deleted.

Disadvantages of the Edge-notched Card System

1. The system is most effective with a survey group no larger than three thousand, and preferably around a thousand. The awkwardness and time spent in handling and "passing" through a greater number of cards does not make this system as desirable and cost-effective as other systems.
2. The cards rapidly wear out with use in a couple of years. At this writing there are many mechanical problems in plasticizing the cards although advances in increasing the longevity of the cards may be made in the future.
3. The number of bits of information to be coded is limited to the number of holes on the side of the card. (about 160 possible codings).

Optical Coincidence Card Systems

Although widely used in Europe, optical coincidence card systems are relatively little known in this country compared to more sophisticated retrieval systems, and can prove to be a highly cost-effective alternative to computerized systems.

Optical coincidence card systems are inverted retrieval systems. Where the edgenotched card system uses a card for each employee and indicates his or her characteristics on this card, the optical coincidence system uses a card for each characteristic (specific skill, career interest, or level of education, etc.) and indicates on each card every employee having the characteristic.

On every card there are 10,000 distinct positions. Each employee is assigned a unique X-Y coordinate position and a corresponding accession number. To input the critical data on an employee, the cards representing his or her characteristics are selected and placed into an input drilling device. The machine then drills through all the cards (up to about forty) at the appropriate X-Y position. About fifteen employees can thus be inputted into the system in an hour.

Information in the system is searched by asking a question, selecting the cards representing the characteristics encompassed by the question, and superimposing these cards over a light source. The holes drilled to indicate the presence of those characteristics in the surveyed employees will allow light to pass through, rapidly indicating those employees who fulfill all the requirements of the question asked. Their complete files can be easily located with the assistance of the accession numbers indicated by the position of the lighted holes.

Advantages of the Optical Coincidence Card System

1. The optical coincidence card system can handle up to ten thousand employees comfortably.
2. Because it is compatible with computer systems, it is a relatively inexpensive interim system to use while vocabulary problems are being worked out, and while the survey is still relatively small.
3. A complete search of all employees can be done in a matter of minutes without having to wait for free computer time.
4. It is a small system that can fit on a desk top. No special room or complicated equipment is needed.
5. It is ready to use the day it is set up, by anyone with a day of operator training.
6. Duplication data sets can be set up in several locations such as regional offices.
7. New types of skills can be easily added to the system.
8. Employees can be searched on up to six criteria at a time.
9. Up to a thousand different characteristics can be coded into the system.

Disadvantages of the Optical Coincidence Card System

1. The capital investment is much greater than for other semi-automatic systems. (About $8000 for equipment, including enough cards for 10,000 employees at time of writing).
2. Complete data on the employee is located apart from the search mechanism, requiring separate retrieval of the files for review.
3. Although it is not difficult to purge individual employees' entire files from the system (by using a green card drilled in the inactive employees' positions), it is relatively time-consuming to remove a specific characteristic of an employee. This is done by plugging up the unwanted hole with a special paste-like substance.
4. Verification of input must be checked constantly, since there is great reliance on the carefulness and accuracy of the input clerk in drilling the holes through the appropriate X-Y position.

Computer Screening and Manual Support File

A computer screening retrieval system backed up by a manual support file is a feasible alternative for large agencies with the computer capabilities and financial resources for such a system. The computer searches for those employees in the file who have the minimal characteristics for the positions involved. The output of the computer can be a simple listing of persons so that files can be pulled for review; or of "profiles" which enable analysts to quickly scan qualifications. Supplemental data on screened employees (such as supervisory evaluations, performance ratings, etc.) can be found in the Official Personnel File.

Actual selection can then be done by the designated official or group of officials.

(This handbook on skills surveys will not deal with the technical aspects of computerized information retrieval systems. Planners who wish to use an ADP system should look to the computer experts in their agency for such guidance.)

Advantages of a Computer Screening and Manual Support File

1. An almost unlimited number of employees can be included in the system.
2. All the pertinent data on the employees can be included in "profile" print-outs. A second search of support files may not be absolutely necessary if sufficient data is included initially and if the material is kept current.
3. The manual support file can reduce the amount of information that needs to be fed into the computer, thus reducing the costs of the system.
4. Searching is extremely rapid and complete.
5. Purging and updating is feasible with the corrected print-out method.
6. A computerized system is capable of being programmed for a great variety of purposes.

Disadvantages of a Computer Screening and Manual Support File

1. Capital investment is high (approximately $10,000 for modifying an already designed program, $5000 for locating a structured vocabulary, and $20,000 per man-year to design the entire system at time of writing).
2. Computer time is not always accessible, particularly for smaller agencies.
3. For many agencies, a programmer or a systems analyst is not readily available and must be located and hired from the outside, adding to the time and expense of the survey.
4. Input and search of data can only be done by specially trained persons, increasing the survey's expense, and decreasing the availability of the data.
5. Problems often occur in the early stages of a computerized system because of the complexity of its many different facets; consequently, it often takes a period of several months before the system is operating smoothly.

Other Retrieval Systems

The retrieval systems already described are but representative samples of the range of available systems. Agencies may find that

their needs can not be met by any of these and may wish to investigate other systems.

Some possible alternatives:

1. **Manual card catalogue system:** a card file with a card for each of 3 to 5 critical characteristics (such as career interest, educational level, years of experience, grade level, skill level) of each employee. Each card lists the characteristics by which the employee was indexed. To locate employees with a few specific characteristics, it is necessary to hand sort through all the cards filed under the most discriminative characteristic. For large numbers of employees it is a very bulky and time consuming storage and retrieval system.
2. **Scan-Column card system:** An inverted card file system with one scan-column card per characteristic. Accession numbers to employee's files are posted on the appropriate cards in columns that correspond to their last digit. Employees with characteristics A,B, and C are located by scanning the corresponding three cards for matching accession numbers. A very inexpensive system but cumbersome with over a few thousand employees or more than ten indexed characteristics per employee.
3. **Fully computerized systems:** Highly complex systems, some of which are capable of a) matching KSAOs of employees with requirements of job vacancies, b) generating individual development plans for employees, c) matching available training programs with training needs, d) projecting completion time of training of employees so that position vacancies can be filled with minimal lag time.

How To Integrate Input And Output To Greatest Advantage

The answers to input [illegible] questions can be most effectively solved with an integrated ap[illegible] areas. The choice of retrieval system will affect all aspects of the input function, including the design, method of administration and coding system of the questionnaire. For example, a short, concise questionnaire would be desirable in a manual search system to reduce the amount of paperwork analysts will have to review. Semiautomatic systems would be greatly simplified with the extensive self-coding of data on the questionnaire, making input a fast and straightforward procedure. A special format questionnaire may facilitate the input of data into a computerized retrieval system (see Appendix 4) but, because of its complexity, may have to be administered in a personal interview.

Appendix 3

The Employee Skills Data Record (NIH-1617) illustrated in this appendix is an example of a form suitable for use in a computerized skills bank. The following additions and/or changes would strengthen this format however:

Item 6A Education (Elementary & High school)

Add: **year** highest grade was completed

Add: option for GED and year received

Item 13 What training programs do you feel are necessary for advancement to your career goals

Add: "Would you be willing to go to school during non-duty hours if necessary?" ☐ yes ☐ no

Item 14D Other Skills

— In the box headed "How was skill learned", add "self-taught" and "correspondence course" to the examples given in parenthesis.

0335-1017
Rev. 7-73

NATIONAL INSTITUTES OF HEALTH
OPPORTUNITY SKILLS FILE

EMPLOYEE SKILLS DATA RECORD

FOR PERSONNEL OFFICE USE ONLY

DATE OF INTERVIEW	INTERVIEWER'S NAME
1ST	
2ND	
3RD	
4TH	
FINAL	

EMPLOYEE'S NAME (Last, first, middle initial)

2A. SOCIAL SECURITY NO.

2B. BIRTHDATE (MO / DAY / YR)

2C. E.O.D. RSH (MO / DAY / YR)

2D. SERV. COMP DATE (MO / DAY / YR)

3. SEX — CODE: 1 = MALE, 2 = FEMALE

4. PHYSICAL HDCP — 1 = YES, 2 = NO

4P. If "Yes" EXPLAIN

5A. HOME ADDRESS

HOME PHONE

5B. WORK LOCATION

OFFICE PHONE

6A. EDUCATION

6B. ADDITIONAL EDUCATION OR TRAINING (Business, trade, military, night school, etc.)

8A. ELEMENTARY (Grade school) (Highest grade completed)

8B. COLLEGE (Yrs. attended)

NO. SEM. HRS.	MAJOR	DEGREE	DATE YR.

8C. GRADUATE (Yrs. attended)

NO. SEM. HRS.	MAJOR	DEGREE	DATE YR.

COURSE / SUBJECT — LGTH OF CR. MOS. / HRS. — LAST % ATTND — COMPLETED (CODE: 1 = YES, 2 = NO)

1 INST. / LOCATION

2 INST. / LOCATION

3 INST. / LOCATION

7A. PROGRAM PARTICIPATION

1 = I would like to participate in the Opportunity Skills File (OSF)
2 = I do not want to participate
3 = Presently, I am not available to participate, but would like to be considered in _____ months

7B. PREFERRED WORK LOCATION

1 = NIH Reservation
2 = West Wood Bldg.
3 = Bethesda
4 = Ft. Detrick
5 = Shift work
6 = Other (explain)

7C. WOULD YOU ACCEPT A LATERAL REASSIGNMENT TO A POSITION OF GREATER LONGER POTENTIAL AND CONSIDERABLY INVOLVE SLIGHT PAY LOSS (CODE: 1 = YES, 2 = NO)

7. PRESENT JOB TITLE

(Describe briefly)

GRADE | STEP | OCCUPATION CODE | TIME IN JOB YRS | MOS

9. HIGHEST GRADE IN JOB

10. FACTORS YOU FEEL THAT ARE KEEPING YOU FROM ADVANCEMENT (1 = Education, 2 = Training, 3 = Experience, 4 = Other (explain))

11. DO YOU HAVE DUTIES OR RESPONSIBILITIES THAT ARE NOT COVERED IN YOUR JOB POSITION DESCRIPTION?
☐ NO
☐ YES (Explain)

EMPLOYEE'S SIGNATURE

DATE

Appendix 3 Page 2

12. WHAT OTHER JOBS DO YOU FEEL YOU CAN DO OTHER THAN YOUR PRESENT JOB

13. WHAT TRAINING PROGRAMS DO YOU FEEL NECESSARY FOR ADVANCEMENT TO YOUR CAREER GOALS

203 AND/OR 204

1 = BASIC EDUCATION
2 = CLERICAL
3 = TECHNICAL
4 = ADMINISTRATIVE
5 = COLLEGE
6 = OTHER (Explain)

14. WORK EXPERIENCE (Describe briefly)

A. 1 = OTHER MILITARY — 200
B. 2 = OTHER GOVT. PVT. — 206
C. 3 = ARMED FORCES — 207
D. 4 = OTHER SKILLS — 208 (ST SKILLS I.E. PAINTING, TRUCK DRIVING, LEADERSHIP, TEACHING, BOOKKEEPING, ETC.)

15. CAREER INTERESTS (If you had a chance, for what kind of job would you like to be developed? Select four (4) of the below occupational areas.)

1st 201 206 — 2nd 200 201 — 3rd 36 202 — 4th 203 204

ADMINISTRATIVE SUPPORT

01 Accounting Clerical/Technician
02 Administrative Management Technician
03 Card Punch Operator
04 Clerk Steno
05 Clerk Typist
06 Computer Aid/Technician
07 General Clerical
08 Grants Assistant
09 Library Aid/Technician
10 Mail Clerk/File Clerk
11 Mathematics Technician
12 Messenger
13 Personnel Clerical/Technician
14 Photography
15 Procurement Clerical
16 Property Equipment Operator
17 Purchasing Assistant/Agent
18 Secretary
19 Statistical Assistant
20 Supply Clerical/General
21 Telephone Operator
22 Travel Clerk
23 Warehouseman

PLANT MAINTENANCE

24 Automotive Mechanic
25 Carpenter
26 Electrician
27 Electronics Technician
28 Engineering Aid/Technician
29 Engineering Drafting
30 Equipment Operator
31 Grounds Maintenance
32 Housekeeper
33 Industrial Equipment Mechanic
34 Laborer
35 Gardener
36 Medical Equipment Repairman
37 Motor Vehicle Operator
38 Painter
39 Plumber
40 Sheet Metal Worker
41 Tool Parts Stockkeeper

LITHOGRAPHIC

42 Bindery Worker
43 Offset Press Operator

LABORATORY

44 Animal Caretaker
45 Biological Laboratory Aid/Technician
46 Dental Laboratory Assistant
47 Laboratory Worker
48 Physical Sciences Aid/Technician

MEDICAL

49 Cook
50 Dental Assistant
51 Health Aid/Technician
52 Nursing Assistant
53 Medical Aid/Technician
54 Pharmacy Assistant

SAFETY

55 Firefighter
56 Guard

PROFESSIONAL INTERESTS (Select one area and specify professional position.)

301 306

57. Administrative _____ 59. Engineering _____
58. Scientific _____ 60. Other _____

	TYPE OF SKILL	HOW WAS SKILL LEARNED (TRAINEE, APPRENTICE ETC.)	LGTH. OF EXP. MO / YRS	LAST USED	DO YOU LIKE THIS SKILL (CODE 1=YES 2=NO)
1	209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228	229 230 231 232 233 234 235 236 237 238	239 240 241 242	243 244	245
2	246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264	265 266 267 268 269 270 271 272 273 274 275 276	276 277 278 279	280 281	282
3	283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302	303 304 305 306 307 308 309 310 311 312	313 314 315 316	317 318	319
4	320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339	340 341 342 343 344 345 346 347 348 349	350 351 352 353	354 355	356

16. A. ADDITIONAL SKILLS — 357 358 359 360 361 362 363 364 365 366 367

B. 370 371 372 373 374 375 376 377 378 379 380

C. 382 383 384 385 386 387 388 389 390 391 392

17. INTERVIEWER REMARKS

393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416

417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432

433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449

450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466

MM-1617 (Revised (Rev. 7-72))

Appendix 3

INSTRUCTION SHEET
for
EMPLOYEE SKILLS DATA RECORD CARD
(NIH-1617)

PLEASE NOTE: To further assist you in the completion of this card, item #17 may be used as a continuation of any question or for recording additional information. Please place only one letter in each numbered block.

ITEM	CODING INSTRUCTION
1	Enter your last name first, space, your first name, space, and your middle initial.
2A	Enter social security number, spacing after the first three numbers and after the next two;
2B	Enter your birth by month, day and year;
2C	Enter date you entered on duty at NIH by month, day and year;
2D	Enter the date you first entered continuous government service (Service Computation Date) by month, day and year.
3	Enter your sex with appropriate number: 1 = male 2 = female
4	If you have any physical handicaps which might impair your ability to work, code 1 = yes and then explain in space provided. If none, code 2 = no.
5A	Enter your home address: Example: number, street city, state, zip code
5B	Enter your work location as it appears in the NIH Telephone Directory. Example: CC, NURS, 10, LS225
6A	Enter in blocks 88 and 89 the highest grade you completed in high school or elementary school. Example: if you completed high school enter 1 2

In block 90 enter the number of years (if any) spent in college at the undergraduate level. In block provided at right enter the number of semester or quarter hours (credits) earned, your major field of study, your degree (if any), and the last year of your attendance;
In block 91 enter number of years (if any) spent in post-graduate studies. In areas provided at right enter the number of semester or quarter hours (credits) earned, your major field of study, your degree (if any) and the last year of your attendance;

6B — If you have taken any formal courses lasting longer than 2 weeks, enter course title in numbered blocks provided. Directly underneath (in unnumbered area marked INST/LOCATION:) give the name of the Institution sponsoring the course and its location;
Enter the length of the course (months, weeks) in four adjacent blocks. Example:

a 1½ year course = 18 mos.

Enter the last year of your course attendance in the next two blocks;
Enter whether or not you completed the course by coding either 1 for yes or 2 for no;
Space is provided for three courses in this area.

7A — Enter the number of the statement directly applicable to your case;

7B — If you have a single preference, enter its number in the block provided. If you have more than one preference enter the number 6 in the block and enter the numbers of your preferences (in order of your preference) in blank space provided;

7C — Such a reassignment would require only slight loss and only after your approval. In such cases, the career area would have a greater career potential than your present area. If you would accept such a reassignment, code 1 for yes, if not code 2 for no.

8 — Write in your present job title and a brief description of your duties (if those duties differ from those of others with your same job title) in space provided;
In the numbered blocks put your grade and step (i.e., GS-5, step 1 = 0 5 0 1), your occupation code, and the time you have spent in your present position (i.e., 5 yrs., 1 mo. = 0501) by years and months.

9 Enter in blocks provided the highest grade *you* think you can reach in your present job. Enter pay plan (GS,WG) and grade (no step).

10 If you feel that something is keeping you from advancement to a better position, please code the appropriate number. If it is not one of these, code 4 and describe. If you believe more than one factor is keeping you from advancement, code 4 and enter the numbers in blank provided.

11 If you have duties which are not covered under your position description check the block marked "yes" and describe those duties. If you do not, check the box marked "no".

12 Please enter the job titles of any jobs you think that you could handle at the present time in space provided.

13 Enter number of appropriate training programs you feel are necessary for your advancement in blocks 203 and 204. If you require any programs not mentioned, code number 6 and enter these programs in blank space provided.

14A Enter code 1 in block 205 and in blank provided enter any other NIH or private work experience you may have;

14B Enter code 2 in block 206 and in blank provided enter any other government or private work experience you may have;

14C Enter code 3 in block 207 and briefly describe any armed services training or positions you may have held;

14D Enter code 4 in block 208. In the 1st row, in the first 20 blocks enter type of skill. In the next ten blocks enter how you learned this skill (O.J.T., trainee, hobby, etc.). In the next 4 blocks enter the length of time you used this skill. In the next 2 blocks enter the last year in which you used this skill (if you are using this skill at present, enter this year). Next, in the last block provided in row 1 code either 1 (yes) or 2 (no) as to whether you would like to use this skill in the future. Space for recording 3 more skills is provided below, continue coding as appropriate. . .

ITEM 15 TO BE COMPLETED *ONLY* AT THE TIME OF THE INTERVIEW — your Personnel Management Specialist will assist you in completing this item.

Read each set of instructions carefully and follow that which applies most nearly to you:

a. If you are interested in being considered for one (or more) of the 56 technical support positions listed on the ESDR card, indicate your choice(s), in order of preference, in blocks 357-364. Example: Electrician 26, Guard 56.

b. If you are only interested in being considered for a professional position, choose from among the professional occupations at NIH included on the supplemental listing below. Code blocks 365-366 for the general area of interest. Example: Administrative — 57, then use blocks 357-364 to indicate the specific occupation(s) of interest to you. Code in order of preference. Example: Economist-AE, Nurse-BJ. *Please consider eligibility requirements for professional positions and determine the likelihood of your eligibility for such a position.*

c. If you aspire to a professional position but currently do not meet CSC eligibility requirements, consider one of the 56 technical support positions listed on the ESDR which may serve as a bridge to your professional aspirations. Then code according to Instruction (a). In addition, indicate in blocks 365-366 the general area of your professional interest and write the specific occupation in the space provided.

PROFESSIONAL OCCUPATIONS
(OSF Supplemental to NIH-1617)

57—*Administrative*

AA	Accountant	AH	Inventory Management Specialist
AB	Administrative Officer	AI	Labor Management Specialist
AC	Contracts Specialist	AJ	Management Analyst
AD	Economist	AK	Personnel Management Specialist
AE	Employee Development Specialist	AL	Personnel Staffing Specialist
AF	Grants Management Specialist		
AG	Hospital Administrator		

57—*Administrative*—Continued

AM	Position Classification Specialist	AP	Supply Management Specialist
AN	Program Analyst	AQ	Transportation Operation Specialist
AO	Safety Management Specialist		

58—*Scientific*

BA	Animal Husbandman	BH	Medical Technologist
BB	Biologist	BI	Microbiologist
BC	Chemist	BJ	Nurse
BD	Geneticist	BK	Pharmacist
BE	Health Physicist	BL	Physical Scientist
BF	Mathematical Statistician	BM	Physiologist
		BN	Psychologist
BG	Mathematician	BO	Sociologist

59—*Engineering*

CA	Chemical Engineer	CF	General Engineer
CB	Civil Engineer	CG	Landscape Architect
CC	Electrical Engineer	CH	Mechanical Engineer
CD	Electronics Engineer	CI	Safety Engineer
CE	Fire Prevention Engineer	CJ	Sanitary Engineer

60—*Other*

DA	Computer Specialist	DJ	Social Worker
DB	Dietician	DK	Recreation Worker
DC	General Business and Industry Specialist	DL	Technical Information Services Specialist
DD	Illustrator		
DE	Librarian	DM	Technical Information Specialist
DF	Occupational Therapist		
DG	Physical Therapist	DN	Technical Writing and Editing Specialist
DH	Property Disposal Specialist		
DI	Public Information Specialist	DO	Writing and Editing Specialist

16 ABC — This area is for additional skills, courses, etc. which could not be placed in areas provided. Code only the name of specific skill in blocks provided.

17 — This area may be used as a continuation of any of the previous questions. Any additional information may also be coded. NOTE: If you do continue any of the previous questions in this area please code

the number of that question along with the information.

If you do not wish to participate in the Program, please code your reasons for not participating (i.e., nearing retirement, happy in present position, etc.).

Appendix 4

The Employee Education, Experience and Training Background Form (National Park Service Form 10-180 adapted) shown in this appendix is an example of a form suitable for use in a noncomputerized system. Appropriate codes would need to be inserted of course. In addition, instructions for coding the data would need to be developed depending upon the retrieval system to be used.

Form 10-180
as adapted

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

EMPLOYEE EDUCATION, EXPERIENCE AND TRAINING BACKGROUND

☐ *Check here if this is your first submission of Form 10-180*

NAME (Last, First, Initial)	Date form completed	BEE USE ONLY Employee BEE Number

EXPERIENCE *Begin with current position and work backwards in time*

1) Dates position held — From: To: PRESENT | Organizational Title of Position | Grade or Salary

Park or Office | Immediate Supervisor

Brief description of duties and mention of significant accomplishments and acting responsibilities

2) Dates position held — From: To: | Organizational Title of Position | Grade or Salary

Park or Office | Immediate Supervisor

Brief description of duties and mention of significant accomplishments and acting responsibilities

3) Dates position held — From: To: | Organizational Title of Position | Grade or Salary

Park or Office | Immediate Supervisor

Brief description of duties and mention of significant accomplishments and acting responsibilities

4) Dates position held — From: To: | Organizational Title of Position | Grade or Salary

Park or Office | Immediate Supervisor

Brief description of duties and mention of significant accomplishments and acting responsibilities

TRAINING: *List only if attended as trainee and course was 16 hours or longer.* Name or description of course	Given by	Given at	No. Hours	Date completed (Mo/Yr)

SPECIAL ASSIGNMENTS AND DETAILS

OTHER SIGNIFICANT INFORMATION Include specific information on suggestions and performance awards, significant writings published, professional attainments such as CPA or bar membership. Describe efforts made to develop skills and abilities on own time or outside normal requirements of job--include offices held and activities in civic, community, and professional organizations. Expand any category above and give other information useful for overall evaluation.

Does the National Park Service employ any relative of yours (by blood or marriage)?
If so state name and present office where employed.

Name _____ Present Office _____ Location _____

10-180

Check highest educational level and year attained

CODE	✓		CODE	✓	
OR 00	☐	Doctorate	OR 04	☐	Associate
OR 01	☐	Masters	OR 05	☐	College, no degree
OR 02	☐	LLB or JD	OR 06	☐	Technical or vocational school
OR 03	☐	Bachelors	OR 07	☐	High school

Check principal fields of college study, write in Maj (Major) or Min (Minor) or Grad opposite appropriate field

CODE	✓			CODE	✓		
		Natural Sciences					
OR 10	☐	Agronomy	_____	OR 41	☐	Public Health	_____
OR 11	☐	Animal Husbandry	_____	OR 42	☐	Public Relations	_____
OR 12	☐	Biology	_____	OR 43	☐	Recreation	_____
OR 13	☐	Botany	_____	OR 44	☐	Sociology	_____
OR 14	☐	Ecology	_____	OR 45	☐	Urban Planning/Development	_____
OR 15	☐	Fish Management	_____	OR 46	☐	Other Social Sciences (specify)	_____
OR 16	☐	Forestry	_____			**Other Fields**	
OR 17	☐	Geography	_____			Engineering	
OR 18	☐	Geology	_____				
OR 19	☐	Horticulture	_____				
OR 20	☐	Marine Biology	_____	OR 47	☐	Civil	_____
OR 21	☐	Natural Resources Management	_____	OR 48	☐	Electrical	_____
OR 22	☐	Oceanography	_____	OR 49	☐	Industrial	_____
OR 23	☐	Ornithology	_____	OR 50	☐	Mechanical	_____
OR 24	☐	Park Management	_____	OR 51	☐	Mining	_____
OR 25	☐	Physiography	_____	OR 52	☐	Sanitary	_____
OR 26	☐	Range Management	_____	OR 53	☐	Safety	_____
OR 27	☐	Vulcanology	_____	OR 54	☐	Other Engineering (specify)	_____
OR 28	☐	Wildlife Management	_____				
OR 29	☐	Zoology	_____	OR 55	☐	Accounting	_____
OR 30	☐	Other Nat. or Phys. Sciences (specify)	_____	OR 56	☐	Architecture	_____
				OR 57	☐	Architecture (Historic)	_____
				OR 58	☐	Business Administration	_____
		Social Sciences		OR 59	☐	Computer Sciences	_____
OR 31	☐	Archeology	_____	OR 60	☐	Fine Arts (Specify)	_____
OR 32	☐	Anthropology	_____	OR 61	☐	Journalism and related fields	_____
OR 33	☐	Economics	_____	OR 62	☐	Landscape Architecture	_____
OR 34	☐	Education	_____	OR 63	☐	Mathematics or Statistics	_____
OR 35	☐	History	_____	OR 64	☐	Visual Arts	_____
OR 36	☐	Language	_____	OR 65	☐	Public Administration	_____
OR 37	☐	Law	_____	OR 66	☐	Real Estate	_____
OR 38	☐	Law Enforcement	_____	OR 67	☐	**Fields not covered above**	_____
OR 39	☐	Police Science	_____				
OR 40	☐	Political Science	_____				

Check knowledge of languages other than English

CODE	✓			CODE	✓		
OR 70	☐	American Indian (Specify)	_____	OR 74	☐	African (Specify)	_____
OR 71	☐	French		OR 75	☐	Asian (Specify)	_____
OR 72	☐	German		OR 76	☐	Other (Specify)	_____
OR 73	☐	Spanish					

GPO 887-489

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SKILLS/ABILITIES INVENTORY

Col. 1. In relating to the positions you have applied for, check those skills/abilities which you are now fully capable of performing.

Col. 2. Considering your career goals, check those skills/abilities in which you are interested in acquiring or improving.

Col. 3. Supervisors check if they disagree with the employee's marking of any item. Comment below.

1	CODE	2	CODE	3	SKILL/ABILITY
☐		☐		☐	Administrative Communications
☐		☐		☐	Financial Plans/Operating Programs Formulation
☐		☐		☐	Financial Plans/Operating Programs Execution
☐		☐		☐	Supervision
☐		☐		☐	Employee Career Counseling
☐		☐		☐	Employee Appraisal/Evaluation
☐		☐		☐	EEO Programs Execution
☐		☐		☐	Labor-Management Negotiating
☐		☐		☐	Training or Instruction of Others
☐		☐		☐	Office Functions
☐		☐		☐	Environmental Impact Statement Preparation
☐		☐		☐	Planning
☐		☐		☐	Liaison with Other Agencies or Organizations
☐		☐		☐	Public and Community Relations
☐		☐		☐	Public Speaking
☐		☐		☐	Long Range Programming
☐		☐		☐	Mgmt. or Maintenance of Archeological Resources
☐		☐		☐	Mgmt. or Maintenance of Historical Resources
☐		☐		☐	Back Country/Wilderness Management
☐		☐		☐	Vegetation Management Programs
☐		☐		☐	Wildlife Management Programs
☐		☐		☐	Campground Management
☐		☐		☐	Concessions Management
☐		☐		☐	Contracting
☐		☐		☐	Fee Collection Management
☐		☐		☐	Property Management
☐		☐		☐	Safety Management
☐		☐		☐	Special Use Permits
☐		☐		☐	Youth Programs
☐		☐		☐	Curatorial Activities
☐		☐		☐	Environmental Education
☐		☐		☐	Interpretive Talks
☐		☐		☐	Interpretive Trail Development

1	CODE	2	CODE	3	SKILL/ABILITY
☐		☐		☐	Interpretive Writing
☐		☐		☐	Living History
☐		☐		☐	Visitor Center Operation
☐		☐		☐	Cooperating Associations
☐		☐		☐	Citation Issuance
☐		☐		☐	Dangerous Drugs Investigation
☐		☐		☐	Search and Seizure Techniques
☐		☐		☐	Trial Preparation/Participation
☐		☐		☐	Traffic Control
☐		☐		☐	Crowd Control Techniques
☐		☐		☐	Evidence Collection/Preservation/Control
☐		☐		☐	Fire Arms Handling (Certified)
☐		☐		☐	Search and/or Rescue Organization
☐		☐		☐	Wildlife Fire Control
☐		☐		☐	Structural Fire Control
☐		☐		☐	Maintenance Management Experience: Buildings
☐		☐		☐	Maintenance Management Experience: Utilities
☐		☐		☐	Maintenance Management Experience: Grounds
☐		☐		☐	Maintenance Management Experience: Roads
☐		☐		☐	Maintenance Management Experience: Trails
☐		☐		☐	Construction Experience: Utilities/Buildings
☐		☐		☐	Construction Experience: Grounds
☐		☐		☐	Construction Experience: Roads
☐		☐		☐	Construction Experience: Trails
☐		☐		☐	Trades and Crafts Journeyman Experience (specify)
☐		☐		☐	Aircraft Pilot (licensed)
☐		☐		☐	Animal Use, Saddle, Pack, Farm
☐		☐		☐	Boat Operation
☐		☐		☐	Scuba Diving
☐		☐		☐	Water Rescue Operations
☐		☐		☐	Technical Rock Climbing and Rescue
☐		☐		☐	Emergency Medical Care
☐		☐		☐	Skiing

POTENTIAL FOR ADVANCEMENT IN OPERATIONS Supervisor comment on employee skills and potential for advancement.

Employee signature	Date	Supervisor's signature	Date

Appendix 5

Key References for Skills Survey Planners:

Executive Order 11478	Equal Employment Opportunity in the Federal Government	August 8, 1969
Public Law 93-579	Privacy Act of 1974	December 31, 1974

Civil Service Commission Publications:

FPM Letter 713-40	Equal Employment Opportunity Plans	August 17, 1977
FPM Chapter 335	Promotion and Internal Placement	December 31, 1973
FPM Supplement 335-1	Evaluation of Employees for Promotion and Internal Placement	June 1969
FPM Letter 713-27	Upward Mobility for Lower Level Employees	June 1974
CSC Bulletin 713-15	Identifying Underutilized Skills in the Workforce	July 23, 1970 (expired)
Handbook X-118	Qualifications Standards for White Collar Positions under the General Schedule	March 1970
Handbook X-118C	Job Qualification Standards for Trades and Labor Occupations	May 1969
Personnel Series #14	"Matching Person to Job—The Job Element Method . . . What It Is and How It Works"	June 1968
Technical Study 7-31-1	"Construction of Questionnaires" by Pauline Duckworth, Personnel Research and Development Center	July 1973
Technical Study 75-1	"How to Prepare and Conduct Job Element Examinations"	June 1975

National Archives and Records Service Publications:

(Available from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402)
Forms Analysis, 1960, GPO Catalog number GS4. 6/2:F76
Forms Design, 1960, GPO Catalog number GS4. 6/2F76/2
Information Retrieval, 1972, GPO Catalog number GS4. 6/2:IN3/2

Other Publications:

Information Retrieval	Doudnikoff, Basil Auerbach Publishers, Inc. Philadelphia, 1973.

☆U.S. GOVERNMENT PRINTING OFFICE: 1978 O—251-728